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ANNUAL VACCINATION RETURNS

OF THE

PROVINCE OF ASSAM

FOR THE YEAR

1920-21

WITH BRIEF EXPLANATORY NOTES

BY

MAJOR J. TAYLOR, I.M.S.,

OFFG. SANITARY COMMISSIONER, ASSAM.



SHILLONG:

PRINTED AT THE ASSAM SECRETARIAT PRINTING OFFICE.

1921.

Price Eleven Annas.]

[Price One Shilling. five pence.



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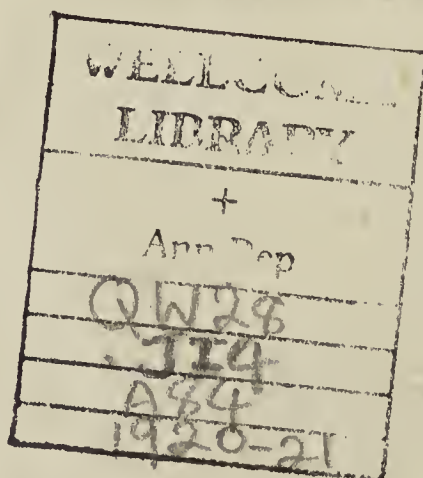
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FROM

MAJOR J. TAYLOR, D.S.O., M.D., D.P.H., I.M.S.,
OFFG. SANITARY COMMISSIONER, ASSAM,

TO

THE SECOND SECRETARY TO THE GOVERNMENT OF ASSAM.

Dated Shillong, the 6th June 1921.

SIR,

I HAVE the honour to submit herewith the Annual Vaccination Returns of the Province of Assam for the year 1920-21, with brief explanatory notes.

I have the honour to be,

SIR,

Your most obedient servant,

J. TAYLOR, MAJOR, I.M.S.,

Offg. Sanitary Commissioner, Assam.

[Prescribed maximum length 3 pages.]

NOTES ON VACCINATION IN ASSAM FOR THE YEAR 1920-21.

1. *Introductory.*—The charge of the Department was held by Major T. C. McCombie Young, I.M.S., up to 14th August 1920 and by Major J. Taylor, I.M.S., in officiating charge from that date until the end of the year.

2. *Vaccination Agencies.*—The vaccination in plains districts was carried out entirely by the staff of vaccinators paid by Local bodies, no unpaid vaccinators being licensed during the year. Vaccinators in hill districts were paid by Government. The total number of vaccinators employed during the year was 451 as against 430 in 1919-20. The number of vaccinators in Sylhet district was increased by 25 during the year and minor increase took place in other districts. The numbers now employed are approximately what was recommended in 1918, the Local Boards having almost without exception brought their vaccination staff to the required level.

3. *Total number of operations.*—The total number of operations performed in Assam during the year 1920-21 was 4,18,936 as compared with 4,41,866 in 1919-20 showing a decrease of 14,459 primary vaccinations and 8,471 re-vaccinations. The decrease is accounted for by the reduction of vaccination in Manipur State by 44,771 the State having had a phenomenal vaccination year in 1919-20. Apart from this special figure the general vaccination of the province would show an increase of 21,841 operations. The number of operations performed by the different agencies was as follows :—

3,99,525 operations by departmental Vaccinators.

2,106 operations by Dispensary staff.

12,346 operations by Tea Garden Agencies.

4,687 operations by Jail, Asylum, Police Hospital and Cholera Hospital Agencies.

272 operations by Railway agency.

4. *Deaths from small-pox.*—The rate of mortality from small-pox in Assam during the year 1920 was .24 per mille of the population as compared with .20 in 1919. The highest ratio (.49) was reported from the district of Darrang. The next highest rate (.46) was in the district of Sylhet where small-pox was epidemic throughout the year, the Habiganj thana being most affected. Sibsagar district with a rate of .28 per mille was third in order. Other districts were little affected. Sixty-six per cent. of the total deaths from small-pox in the province occurred in Sylhet district.

5. *Dispensary vaccination.*—The total number of persons vaccinated at dispensaries during 1920-21 was 2,106 as compared with 11,119 in 1919-20.

6. *Percentage of successful operations.*—The percentage of success in primary vaccinations was 94.93 and that for re-vaccinations 65.01 as compared with 95.71 and 72.04 respectively in 1919-20.

7. *Different methods of vaccination.*—All vaccinations were performed with glycerinated lymph made in the Vaccine Depôt, Shillong.

8. *Vaccination work in different districts.*—Eight districts show an increase in the number of operations performed during the year under report as compared with the preceding year, viz., Sylhet (+15,109), Naga Hills (+7,726), Darrang (+4,955), Goalpara (+2,464), Garo Hills (+2,142), Lakhimpur (+413), Nowgong (+142) and Khasi and Jaintia Hills (+114). Decreases occurred in Manipur State (—44,771), Cachar (—4,882), Kamrup (—2,900), Sibsagar (—2,166), Lushai Hills (—1,174) and Sadiya Frontier Tract (—102). The increase in Sylhet was due to the large number of operations done in Habiganj subdivision to combat the outbreak of small-pox in that area. The decrease in Manipur State as compared with the previous year is due to the very extensive vaccination campaign carried out in the State in 1919-20 during which period 20 per cent. of the total population was vaccinated. The rate could naturally not be kept up.

9. *Composition and strength of the inspecting staff.*—A Deputy Sanitary Commissioner was appointed during the year. One additional Sub-Inspector of Vaccination was appointed for the Sadiya Frontier Tract. No other changes were made.

10. *Verification by the inspecting staff.*—The Civil Surgeons and the Subdivisional Assistant Surgeons on their behalf inspected 13,468 primary operations and 5,689 re-vaccinations or 4.45 and 5.73 per cent. respectively of the total vaccinations made during the year. Three thousand and sixty primary and 367 re-vaccinations were inspected by the Deputy Sanitary Commissioner, the inspections by these two agencies being 5.46 per cent. and 6.10 respectively of the total primary and re-vaccinations done. The Sanitary Commissioner inspected 2,041 primary and 939 re-vaccinations. The Civil Surgeons of Cachar, Nowgong and Lakhimpur inspected the largest proportions of primary vaccinations done in their districts the percentages inspected being 14.67, 8.70 and 8.48 respectively. The largest totals inspected were 4,707 primary and 3,937 re-vaccinations by the Civil Surgeon, Sylhet. The Subordinate Inspecting Staff inspected 46.24 per cent. of primary operations and 44.48 per cent. of re-vaccinations as compared with 51.35 and 39.25 respectively in the previous year. In the Khasi and Jaintia Hills district 88.20 per cent. of primary and 76.24 per cent. of re-vaccinations were inspected, this being the largest rate for the province. In the Garo Hills only 8.65 per cent. of primary and 29.55 per cent. of re-vaccinations were inspected. Inspection was poor in Goalpara district, the figures being 14.88 per cent. and 19.72 per cent. this low rate being due to changes in the staff.

11. *Vaccination in Compulsory areas.*—Out of an estimated number of 3,548 infants available for vaccination in the areas in which the Compulsory Vaccination Act is in force 1,786 or 50.33 per cent. were successfully vaccinated as compared with 58.78 per cent. in the previous year.

A detailed examination of the registers in Municipalities and Unions where vaccination is compulsory showed that very few children who had attained the full age of one year had escaped vaccination, but as vaccination is not compulsory until one year is completed a large number of the children born during the year carry over to the vaccination season of the following year. Of children born during the year and available for vaccination 79.3 per cent. were successfully vaccinated in Nowgong, 77 per cent. in Tezpur and 70.7 per cent. in Silchar. The lowest rates were in the town of Sylhet (14.6), Sunamganj (19.8), Karimganj (27.5) and Barpeta (26.1).

12. *Vaccine Depot.*—The total number of capillary tubes loaded for issue during the year was 6,41,678, against 7,99,297 in 1919-20, showing a decrease of 1,57,619, although the decrease in operations was only 22,930. This probably indicates better distribution and less waste of vaccine lymph.

The total cost of working of the Vaccine Depot during the year was Rs. 12,474-4-6 as against Rs. 15,093-8-5 in the preceding year. There was a reduction in the cost of capillary tubes obtained from England of Rs. 2,139-1-8 owing to a favourable rate of exchange. The cost and upkeep of calves was reduced by Rs. 970-15-0 owing to the smaller number under operation, 84 fewer being purchased than in the previous year. Six hundred and eighteen calves were inoculated in 1920-21 and lymph was taken from 522 only. Failure of operation accounted for 35 rejections, illness for 18 and ulceration and unsatisfactory vesicles for 42. One calf died. The greater part of the lymph used was from 144-hour vesicles the inoculation of calves being made by puncture. A few of calves were inoculated by linear incision and the lymph collected at 120 hours. The linear incisions gave a slightly greater outturn of lymph but the earlier collection resulted in a diminution of the average amount obtained from each calf by 27 per cent. Reports on 1,086 vaccinations done with 120-hour lymph show a percentage success of 96.2 as compared with 94.93 for the total vaccinations during the year.

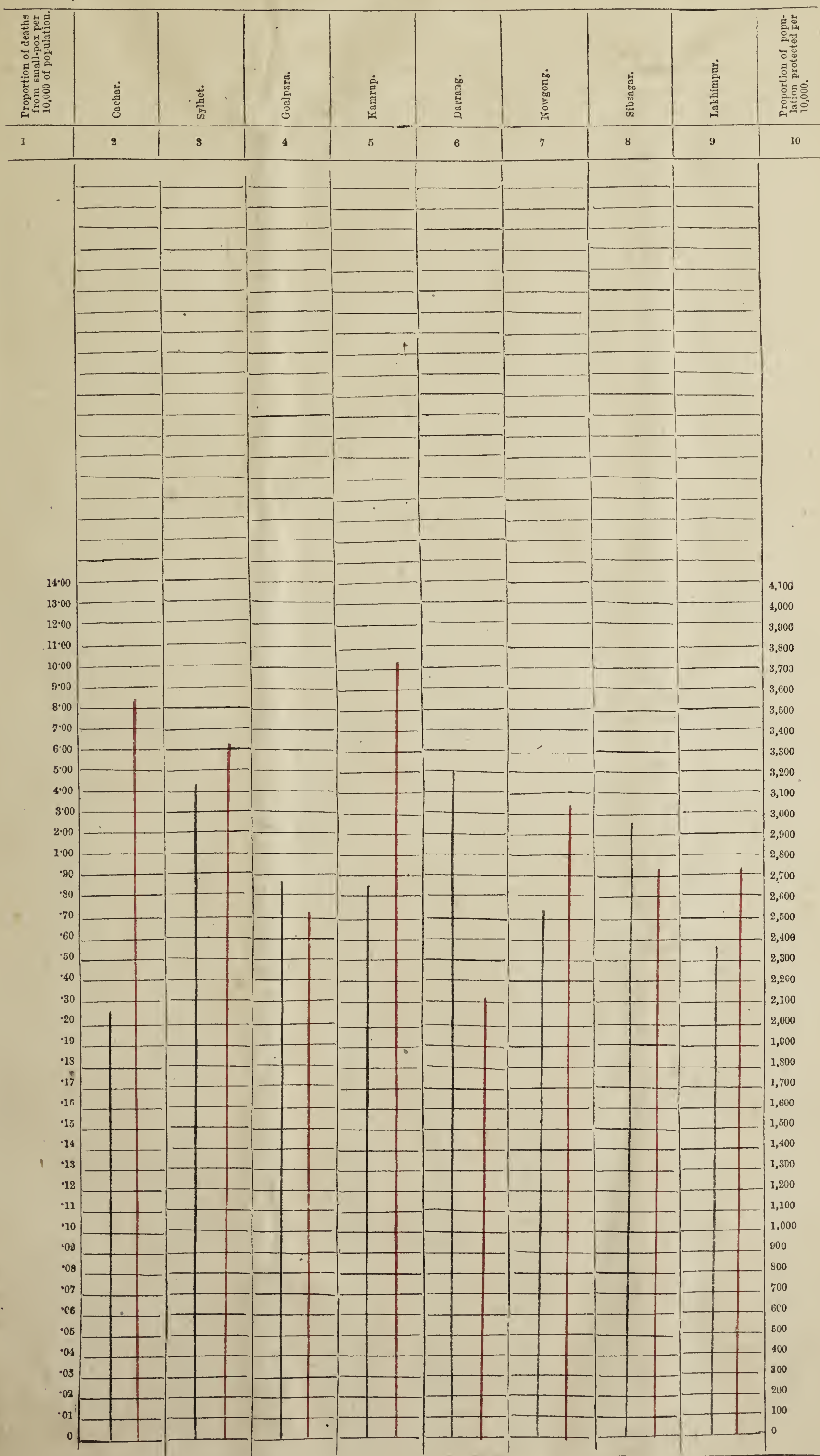
13. *Cost of the Department.*—The total cost of the department amounted to Rs. 78,973-15-2 during the year 1920-21, as compared with Rs. 71,167-8-9 in 1919-20. There was an increase of Rs. 3,595-8-7 in the cost of subordinate supervising staff due to revision of rates of pay and the appointment of an additional Sub-Inspector. The increase in cost of vaccinators was Rs. 6,436-7-3 due to the employment of 21 additional vaccinators and to revision of their pay. The contingencies of the Vaccine Depot were reduced by Rs. 3,104-7-7 as compared with in 1919-20.

The cost of each successful vaccination was annas 3 and pies 8 as compared with annas 3 and pies 3 in 1919-20, the increase being mainly due to the additional cost of vaccinating staff.

14. *General.*—Twelve thousand three hundred forty-six vaccinations are reported to have been done in tea gardens by Garden Medical Officers as compared with 18,096 in 1919-20. The percentage of success in primary vaccination was 96.67. The number reported from Jails, Lunatic Asylum, Police hospitals and Cholera hospitals was 4,687 as against 5,152 in the previous year.


J. TAYLOR, Major, I.M.S.,
Offg. Sanitary Commissioner, Assam.

The following diagram illustrates the death-rates from small-pox in each district side by side with the proportion of the population protected against the disease by vaccination during the seven years 1914-15 to 1920-21.



NOTE.—Black lines indicate death-rates from small-pox.

Red lines indicate the proportion of population protected by vaccination.



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STATEMENTS.

A.—VACCINE

Statement No. I—Showing particulars of Vaccination in

No.	District.	Population of district according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary	
									Total.	Under one year.
1	2	3	4	5	6			7	8	9
SURMA VALLEY AND HILL DISTRICTS.					Mal.	Female.	Total.			
1	Cachar	497,463	139	32	13,520	10,914	24,464	764	18,784	2,623
2	Sylhet	2,472,671	458	146	88,582	78,477	167,059	1,144	120,688	10,668
3	Khasi and Jaintia Hills	235,069	40	9	6,823	6,723	13,546	1,505	7,86	1,286
4	Naga Hills	149,623	48	5	6,778	6,307	13,085	2,617	4,987	1,091
5	Lushai Hills	91,204	12	5	4,041	3,103	7,144	1,429	4,503	186
Total of Surma Valley and Hill Districts		3,446,030	136	197	119,744	105,554	225,298	1,143	156,953	15,854
ASSAM VALLEY DISTRICTS.										
6	Goalpara	600,643	151	48	16,150	12,702	28,852	601	23,557	6,954
7	Kamrup	667,828	173	51	16,625	14,465	31,090	609	29,722	7,142
8	Darrang	377,314	110	28	10,432	7,956	18,388	657	12,731	1,173
9	Nowgong	303,596	79	23	6,953	6,153	13,106	569	12,601	2,100
10	Sibsagar	690,299	138	53	13,985	12,554	26,539	501	22,847	2,906
11	Lakhimpur	468,989	103	31	9,739	8,792	18,531	598	17,996	2,771
12	Garo Hills	1,8,936	50	7	4,207	3,877	8,084	1,155	6,103	3,678
Total of Assam Valley Districts		3,267,605	118	241	78,091	66,499	144,590	600	125,562	26,724
13	Manipur State	346,222	41	9	15,027	12,701	27,728	3,081	17,059	7,188
14	North-East Frontier District ... ..	...	...	4	1,053	856	1,909	477	1,869	239
Total Vaccine Department		7,059,857	115	451	213,915	185,610	399,525	885	301,443	50,005
Total Dispensaries ... ..		...	...	...	...	...	2,106	...	1,017	155
Total tea-gardens by garden agencies ... ..		...	...	...	6,231	6,115	12,346	...	11,222	5,967
Total Jails, Lunatic Asylum, Police hospitals and Coolie Depôts.		...	...	...	3,874	813	4,687	...	458	8
Total Railways ... ..		...	...	...	197	75	272	...	93	24
Grand total		7,059,857	115	451	224,217	192,613	418,936	885	314,233	56,159

Sum

1	Total number of persons vaccinated.		Total number of operations performed.	
	Primary.	Re-vaccinations.	Primary.	Re-vaccinations.
2	3	4	5	
By special staff (Statement I)	301,443	98,082	301,443	98,082
By dispensary staff (Statement III)	1,017	1,039	1,017	1,039
By other agencies—tea-gardens, Jail hospital, Police hospital, cholera hospital and coolie depôts.	11,773	5,532	11,773	5,532
Total ...	314,233	104,703	314,233	104,703

DEPARTMENT.

the Province of Assam during the year 1920-21.

vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of death from small-pox during previous five years.	
Successful.														
Over one and under six years.	Total of all ages.	Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
12,294	17,909	140	5,680	3,550	267	96.05	65.58	43.13	.74	4.70	18,683	37.55	320	.64
8,411	115,171	...	46,371	27,596	...	95.42	59.51	57.73	...	...	109,844	41.42	752	.30
3,506	7,823	159	5,560	2,804	226	99.94	52.56	45.20	1.99	4.06	7,652	32.55	4	.01
2,071	4,434	181	8,098	5,052	165	92.25	63.68	63.39	3.63	2.03	4,562	38.48	...	...
1,778	4,008	127	2,636	1,848	124	91.48	73.56	64.20	2.81	4.70	3,773	41.36	...	...
100,060	119,345	607	68,345	40,850	782	95.52	60.46	55.19	.33	1.14	144,514	41.93	1,076	.31
13,870	20,824	213	5,295	4,457	108	89.20	85.92	42.08	.90	2.04	20,172	33.58	318	.52
16,879	28,016	588	1,368	597	489	96.16	67.34	42.84	1.97	35.08	35,369	52.96	455	.68
7,866	10,602	334	5,657	2,870	672	85.86	57.57	35.70	3.01	11.87	10,120	26.82	112	.29
8,218	12,444	2	505	477	5	98.76	95.40	42.55	.01	.99	12,352	40.63	34	.11
15,469	21,933	...	3,692	2,323	60	95.99	63.95	35.13	...	1.62	23,935	34.67	552	.79
12,885	17,314	52	535	241	13	96.48	46.16	37.43	.28	2.43	12,679	27.03	60	.12
1,545	5,428	340	1,976	1,691	105	94.10	90.37	44.79	5.26	5.31	5,967	37.54	11	.06
76,732	116,561	1,579	19,028	12,656	1,443	94.01	71.97	39.54	1.25	7.58	120,594	36.90	1,542	.47
4,502	11,690	4,867	10,669	6,093	3,872	95.88	89.64	51.36	28.53	36.29	20,610	59.52	...	...
1,156	1,719	51	40	22	3	94.55	59.45	...	2.72	7.50	...	...	...	...
182,450	279,315	7,104	98,082	59,621	6,100	94.89	64.81	48.01	2.35	6.21	285,718	40.47	2,618	.37
412	892	63	1,089	473	279	93.50	58.39	...	6.19	25.62	3,451	...	...	...
4,137	10,854	29	1,124	773	201	96.97	83.74	...	.25	17.88	21,818	...	...	...
4	185	170	4,229	1,519	1,954	64.23	66.76	...	37.12	46.20	1,406	...	...	...
49	84	...	179	134	1	90.32	75.28	...	...	.56	99	...	...	...
187,052	291,330	7,366	104,703	62,520	8,535	94.93	65.01	50.12	2.34	8.15	312,492	44.26	2,618	.37

mary.

Percentage of successful cases in which results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccination per 1,000 of population.	Total cost of Department.	Average cost of each successful case.
Primary.	Re-vaccinations.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under six years.			
6	7	8	9	10	11	12	13	14
94.89	64.81	451	885	50,005	182,450	48.01	Rs. a. p. 78,973 15 2	Rs. a. p. 0 3 8
93.50	58.39	...	...	155	412	...	...	...
96.10	71.86	...	...	5,999	4,190	...	...	...
94.93	65.01	451	885	50,159	187,052	50.12	78,973 15 2	0 3 8

Statement No. II—Showing the cost of Vaccination in

No.	District.	Expen												
		European supervising officer.	Pay.	Native supervising officer.	Pay.	Paid vaccinators.	Pay.	Licensed vaccinators.	Pay.	Clerks.	Pay.	Peons, etc.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.	Rs. a. p.
1	Cachar ...	...	...	2	1,223 0 0	32	3,934 11 6	...	...	...	...	...	...	5,157 11 6
2	Sylhet ...	...	...	7	3,249 0 0	146	11,477 2 1	...	...	...	...	...	...	14,726 2 1
3	Khasi and Jaintia Hills	...	...	2	912 0 0	9	2,235 7 2	...	...	...	...	...	...	3,147 7 2
4	Naga Hills	...	...	1	540 0 0	5	1,120 8 0	...	...	...	...	...	...	1,660 8 0
5	Lushai Hills	...	...	1	318 2 6	5	586 1 9	...	...	...	...	...	...	904 4 3
6	Goalpara ...	...	...	2	970 7 9	48	2,953 4 3	...	...	...	...	...	...	3,923 12 0
7	Kamrup ...	...	...	2	1,519 7 0	51	4,343 9 10	...	...	...	...	...	...	5,863 0 10
8	Darrang ...	...	...	2	930 3 4	28	2,923 11 2	...	...	...	...	...	...	3,853 14 6
9	Nowgong ...	...	...	3	1,116 0 0	23	1,489 9 4	...	...	...	...	...	...	2,605 9 4
10	Sibsagar ...	...	...	3	1,379 14 1	53	3,679 3 1	...	...	...	...	...	...	5,059 1 2
11	Lakhimpur	...	...	2	1,140 0 0	31	3,568 14 2	...	...	...	...	...	...	4,708 14 2
12	Garo Hills	...	...	1	432 0 0	7	798 14 3	...	...	...	...	...	...	1,230 14 3
13	Manipur State	...	...	1	240 0 0	9	1,080 12 11	...	...	...	...	...	...	1,320 12 11
14	North-East Frontier District.	...	...	1	195 0 0	4	416 4 5	...	...	...	...	...	...	611 4 5
	Total of Districts ...	...	...	30	14,165 2 8	451	40,608 1 11	...	...	...	...	...	...	54,773 4 7
	Shillong Vaccine Depôt	1	690 0 0	1	1,260 0 0	12	2,301 13 7	...	...	...	...	...	...	4,161 13 7
	Total for the Province	1	600 0 0	31	15,425 2 8	463	42,909 15 6	...	...	...	...	...	...	58,935 2 2

the Province of Assam during the year 1920-21.

diture.				Paid from—						Number of all successful vaccinations and re-vaccinations.	Average cost of each successful case.
Travelling allowance.	Contingencies.		Total cost.	Imperial Fund.	Provincial Fund.	Local Fund.	Municipalities.	Native States.	Total.		
	Cost of Vaccine.	Other contingencies.									
16	17	18	19	20	21	22	23	24	25	26	27
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.
617 14 3	...	115 0 6	5,890 10 3	...	2,357 13 3	3,283 10 0	249 3 0	...	5,890 10 3	21,459	0 4 4
2,145 0 9	...	569 7 6	17,440 10 4	...	5,098 12 9	11,981 4 7	360 9 0	...	17,440 10 4	142,767	0 2 0
1,651 2 0	...	22 0 0	4,820 9 2	...	4,600 9 2	...	220 0 0	...	4,820 9 2	10,627	0 7 3
711 8 0	...	7 0 0	2,379 0 0	...	2,379 0 0	...	...	...	2,379 0 0	9,486	0 3 11
42 9 0	...	10 0 0	956 13 3	...	956 13 3	...	...	...	956 13 3	5,856	0 2 7
269 1 9	...	157 1 6	4,349 15 3	...	1,345 5 0	2,798 14 4	205 11 11	...	4,349 15 3	25,281	0 2 7
552 2 3	...	445 6 9	6,860 9 10	...	2,436 12 6	3,848 10 3	575 3 1	...	6,860 9 10	28,613	0 3 8
1,337 10 9	...	89 3 6	5,280 12 9	...	2,231 10 1	2,834 10 8	214 8 0	...	5,280 12 9	13,472	0 6 3
619 12 10	...	38 6 0	3,263 12 2	...	1,665 12 4	1,526 7 3	71 8 7	...	3,263 12 2	12,921	0 3 10
568 3 3	...	150 0 0	5,777 4 5	...	2,098 1 4	3,106 3 4	572 15 9	...	5,777 4 5	24,256	0 3 9
744 1 0	...	63 0 0	5,515 15 2	...	1,774 7 0	3,453 8 2	288 0 0	...	5,515 15 2	17,555	0 4 0
320 9 0	...	9 7 0	1,560 14 3	...	1,560 14 3	...	...	...	1,560 14 3	7,119	0 3 6
...	...	15 8 0	1,336 4 11	...	...	...	...	1,336 4 11	1,336 4 11	17,783	0 1 2
373 0 0	...	82 2 6	1,066 6 11	1,066 6 11	...	...	...	...	1,066 6 11	1,741	0 9 9
9,952 10 10	...	1,773 11 3	66,499 10 8	1,066 6 11	28,505 14 11	32,833 4 7	2,757 11 4	1,336 4 11	66,499 10 8	338,936	0 3 1
...	...	8,312 6 11	12,474 4 6	...	12,474 4 6	...	...	...	12,474 4 6	...	...
9,952 10 10	...	10,086 2 2	78,973 15 2	1,066 6 11	40,980 3 5	32,833 4 7	2,757 11 4	1,336 4 11	78,973 15 2	338,936	0 3 8

B.—DISPENSARY

Statement No. III—Showing Dispensary Vaccination

District.	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary vaccination.				
					Total.	Successful.			Unknown.
						Under one year.	Over one and under six years.	Total of all ages.	
1	2	3	4	5	6	7	8	9	10
Cachar
Sylhet
Khasi and Jaintia Hills
Naga Hills	53	...	49	26	20	49	...
Lushai „	568	...	430	17	133	367	18
Goalpara	38	...	15	5	10	15	...
Kamrup
Darrang	326	...	107	10	21	65	40
Nowgong	239	...	181	13	144	177	...
Sibsagar	2	...	2	...	...	2	...
Lakhimpur
Garo Hills	2	...	2	...	1	2	...
Manipur State	806	...	162	83	70	153	3
North-East Frontier District.	72	...	69	1	13	62	2
Total	2,106	...	1,017	155	412	892	63

Comparative Statement No. IV—Showing the number of persons primarily vaccinated in each of the under

Establishment.	Persons							
	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.
	Year ending							
	1911-12.		1912-13.		1913-14.		1914-15.	
1	2	3	4	5	6	7	8	9
Government ...	24,950	24,146	30,130	28,802	33,014	31,655	23,384	20,649
Dispensaries ...	1,464	1,390	1,036	937	1,005	900	1,580	1,430
Municipal ...	3,262	3,023	3,517	3,093	2,897	2,865	2,828	2,684
Local Funds ...	179,887	176,566	179,380	176,043	179,040	176,981	169,629	163,948
Licensed vaccinators	37,963	37,231	45,790	44,336	44,537	43,523	34,560	32,706
Apprentices ...	16,762	16,411	13,669	13,542	15,329	15,007	17,208	16,645
Native States ...	13,193	11,756	13,656	11,521	13,626	12,343	13,756	12,595
Total ...	277,481	270,523	287,178	278,274	289,448	283,274	262,945	250,657

VACCINATION.

in the Province of Assam during the year 1920-21.

Re-vaccination.			Percentage of successful cases in which the results were known.		Percentage of unknown cases to total cases.	
Total.	Successful.	Unknown.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
11	12	13	14	15	16	17
...
...
...
4	4	...	100·00	100·00	...	...
138	71	16	89·07	58·19	4·18	11·59
23	4	...	...	...	...	...
...
219	123	9	97·01	63·33	37·38	4·10
58	43	...	97·78	74·13	...	...
...	...	...	100·00	...	...	...
...
...	...	...	100·00	...	...	...
644	218	254	96·62	55·89	1·85	39·44
3	...	...	92·53	...	2·89	...
1,089	473	279	93·50	58·39	6·19	25·52

and the number of those persons who were successfully vaccinated in the Province of Assam mentioned official years.

primarily vaccinated.

Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.
31st March.											
1915-16.		1916-17.		1917-18.		1918-19.		1919-20.		1920-21.	
10	11	12	13	14	15	16	17	18	19	20	21
21,309	18,365	23,969	22,218	23,473	20,246	17,309	15,570	22,970	20,632	26,096	24,194
1,095	945	2,553	2,149	1,929	1,704	1,406	1,216	4,787	3,892	1,017	892
5,575	5,389	5,110	4,793	4,495	4,199	4,072	3,792	4,606	4,276	3,858	3,431
173,757	168,724	213,215	203,712	201,759	189,413	170,387	162,163	249,931	238,218	252,105	237,777
25,697	24,562	18,942	18,154	18,760	17,188	14,316	12,931	...	...	...	...
16,342	15,966	6,445	6,235	7,883	7,614	7,161	7,011	5,271	5,180	2,325	2,223
13,974	12,966	12,946	12,023	12,947	9,909	8,689	7,265	26,595	16,159	17,059	11,630
257,749	246,917	283,180	274,284	271,251	250,273	223,340	209,948	314,160	288,407	302,460	280,207

Statement No. V—Showing particulars of Vaccination verified by Inspecting Officers for the year 1920-21.

District.	Total number of persons vaccinated.		Total number inspected.				Percentage of inspection to total number vaccinated.				Percentage of successful cases to total number inspected.				Percentage of successes reported by vaccinators.	
			By Deputy Sanitary Commissioners or Civil Surgeons.		By Native Superintendents or other Inspecting Officers.		By Deputy Sanitary Commissioners or Civil Surgeons.		By Native Superintendents or other Inspecting Officers.		By Deputy Sanitary Commissioners or Civil Surgeons.		By Native Superintendents or other Inspecting Officers.			
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Cachar ...	18,784	5,680	2,769	476	10,535	2,301	14.74	8.38	56.08	40.51	97.14	82.14	95.49	71.01	96.05	65.53
Sylhet ...	120,688	46,371	6,686	4,270	61,339	23,068	5.53	9.20	50.82	49.74	93.38	57.21	93.82	47.38	95.42	59.51
Khasi and Jaintia Hills ...	7,986	5,560	168	166	7,044	4,239	3.35	2.98	88.20	76.24	97.76	64.46	99.90	53.90	99.94	52.56
Naga Hills ...	5,036	8,102	133	...	2,300	5,921	2.64	...	45.67	73.08	93.98	...	92.78	72.25	92.25	63.63
Lushai „ ...	4,938	2,774	105	88	2,760	1,129	2.12	3.17	55.89	40.69	90.48	69.32	98.69	87.33	91.48	73.56
Goalpara ...	23,572	5,318	227	32	3,509	1,049	.96	.60	14.88	19.72	93.05	40.64	75.89	19.98	89.20	85.92
Kamrup ...	29,722	1,368	1,200	34	9,570	421	4.03	2.48	32.19	30.77	97.00	41.17	89.31	11.48	96.16	67.34
Darrang ...	12,838	5,876	696	144	6,167	2,097	5.42	2.45	48.03	35.68	86.39	42.00	86.42	59.58	85.86	57.57
Nowgong ...	12,782	563	1,600	...	9,299	354	12.51	...	72.75	62.88	94.81	...	93.79	96.52	98.76	95.40
Sibsagar ...	22,849	3,692	598	79	8,914	859	2.61	2.13	39.01	23.26	97.00	34.49	96.95	52.38	95.99	63.95
Lakhimpur ...	17,996	535	1,526	...	11,881	246	8.48	...	66.02	45.98	97.90	...	97.36	39.02	96.48	46.16
Garo Hills ...	6,110	1,976	147	527	529	534	2.40	26.92	8.65	29.55	88.43	91.84	89.41	98.11	94.10	90.37
Manipur State ...	17,221	11,313	673	240	4,825	1,826	3.90	2.12	28.01	16.12	90.63	71.66	97.13	85.37	95.88	89.64
North-East Frontier District	1,938	43	...	...	1,197	20	...	...	61.76	46.51	...	...	87.00	50.00	94.55	59.45
Total ...	302,460	99,171	16,528	6,056	139,869	44,114	5.46	6.10	46.24	44.48	93.83	60.50	92.78	60.03	94.89	64.81

Statement No. VI—Showing the number of vaccinations performed in Municipal towns on children under one year of age during the year 1920-21.

District.	Town.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccination on children under one year during the year ending 31st March 1921.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Cachar	Silchar	236	31	145	21st January 1892.
	Sylhet	378	78	44	1st October 1882.
	Habiganj	148	22	151	11th December 1913.
Sylhet	Sunamganj	141	25	23	28th June 1915.
	Karimganj	99	12	24	27th July 1915.
	Maulvi Bazar	64	19	50	16th April 1916.
Khasi & Jaintia Hills	Shillong	469	42	152	21st June 1895.
	Total of Surma Valley and Hill Districts.	1,535	229	589	
Goalpara	Dhubri	205	36	95	13th February 1891.
	Goalpara	213	35	104	12th November 1890.
Kamrup	Gauhati	417	67	212	August 1882.
	Barpeta	534	56	125	29th October 1915.
Darrang	Tezpur	182	30	117	22nd May 1907.
	Mangaldai	10	4	21	12th October 1916.
Nowgong	Nowgong	210	11	158	7th April 1897.
	Sibsagar	147	21	49	21st January 1892.
Sibsagar	Jorhat	164	53	120	12th April 1892.
	Golaghat	77	14	18	24th March 1892.
	Nazira	52	1	26	1st December 1916.
Lakhimpur	Dibrugarh	364	24	144	September 1883.
	Doom Dooma	21	2	8	21st October 1918.
	Total of Assam Valley Districts.	2,596	354	1,197	
	Total for the Province.	4,131	583	1,786	

Showing, side by side, the ratio per 1,000 of population of deaths.

District.	1911-12.		1912-13.		1913-14.		1914-15.	
	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.
	2	3	4	5	6	7	8	9
Cachar	·002	16,641	·008	16,992	·006	19,596	...	15,146
Sylhet	·38	108,987	·99	132,022	·47	113,226	·14	100,597
Khasi and Jaintia Hills ...	·004	7,369	·13	10,740	·35	9,128	·64	8,108
Naga Hills ... ..	...	4,836	...	5,119	...	6,363	...	4,572
Lushai „ ... ..	...	3,121	...	3,123	...	3,027	...	3,481
Goalpara	·44	23,151	·69	19,731	·59	23,408	·78	24,185
Kamrup	1·21	39,178	1·89	39,978	1·02	42,323	2·03	40,178
Darrang *	·56	10,606	·50	10,964	·82	11,508	·36	12,092
Nowgong	·44	8,469	·95	6,602	·43	12,946	·24	12,494
Sibsagar	·16	18,490	·09	18,298	·14	18,768	·18	18,077
Lakhimpur ... ..	...	14,119	·006	14,063	·07	14,227	·09	13,982
Garo Hills	·01	15,161	·09	12,338	·84	22,813	·60	9,368
Manipur State ... ..	...	12,025	...	11,678	...	12,498	...	12,879
North-East Frontier District ...	...	...	...	...	...	...	...	...
Total	·35	282,153	·67	301,648	·40	309,831	·37	275,159

MENT No. VII.

from small-pox and the number of successful vaccinations during the ten years ending 1920-21.

1915-16.		1916-17.		1917-18.		1918-19.		1919-20.		1920-21.	
Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.
10	11	12	13	14	15	16	17	18	19	20	21
·008	13,641	·59	26,734	2·24	17,561	·49	14,244	·03	22,736	·02	21,459
·06	102,842	·26	120,578	·52	93,549	·11	104,435	·16	127,816	·46	142,767
·02	4,963	...	9,385	·03	7,902	·11	5,395	...	10,824	·20	10,627
...	3,843	...	4,811	...	4,663	...	7,766	...	4,569	...	9,539
·02	3,639	...	3,610	...	4,031	...	2,380	...	7,098	...	6,294
1·07	23,236	·82	20,263	79	19,822	·27	14,007	·66	23,579	·09	25,300
3·10	35,050	·79	36,881	·74	44,802	1·65	27,727	·13	32,386	·08	28,613
·61	13,563	·61	11,130	·08	11,582	·08	3,163	·19	11,162	·49	13,670
·25	12,408	·31	13,106	·04	13,225	·05	11,722	·02	12,845	·07	13,141
1·22	22,813	1·35	29,676	·96	23,404	·81	15,182	·58	28,601	·28	24,258
·06	10,282	·18	9,758	·16	15,905	·14	10,536	·09	16,915	·05	17,555
·39	8,171	·13	6,773	·98	5,023	...	5,198	·06	5,138	·08	7,121
...	13,094	...	12,152	...	18,159	...	17,699	...	50,439	...	18,154
...	...	...	765	...	707	...	471	...	1,351	...	1,803
·58	267,545	·47	305,622	·59	280,335	·34	239,925	·20	355,459	·24	340,301

